

60,130-787; 99MRA0113

UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Fowler, et al. GROUP ART UNIT: 2838  
SERIAL NO.: 09/832,677 EXAMINER: Patel, Rajnikant  
FILED: 4/11/2001  
FOR: CONVERSION OF SINGLE PHASE TO MULTIPLE PHASE

ATTORNEY DOCKET NO.: 60,130-787

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

MAY 07 2003

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RESPONSE

Dear Sir:

In response to the Office Action of February 13, 2003, Applicant requests consideration of the following arguments.

Claims 1-20 remain in the application including independent claims 1 and 10. Claims 1-6, 8, 10, 12-13 and 16-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over newly cited Young in view of newly cited Yamanaka. There is no motivation or suggestion to modify Young with the teachings of Yamanaka. Further, the examiner has not provided any explanation of the motivation or suggestion that would result in the modification of Young to arrive at the subject matter of claims 1-6, 8, 10, 12-13 and 16-19.

Also, the examiner argues that Young discloses a method of converting single phase alternating current to multiple phase alternating current "for simultaneously powering multiple vehicle systems . . ." This is not an accurate characterization of Young. Young is directed to commercial power plant technology, not vehicles. Young provides an apparatus for starting and

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running three-phase motors from a single phase power line, such as that found in rural and residential areas. See column 1, lines 13-35.

Yamanaka is directed toward solving problems relating to battery packs for an electric vehicle. Thus, the power distribution systems in each of these references are very different from each other and have very diverse operational requirements. There is simply no teaching or suggestion to make the modification. The examiner has pointed to no teaching in Yamanaka of any particular benefit derived from the Yamanaka system that would be applicable to Young. In addition, there is nothing in Young that would have led one of ordinary skill in the art to believe that the Young power distribution system was in any way deficient for Young's purposes or was in need of modification. One of ordinary skill in the art would have found no reason, suggestion, or incentive to combine these references to arrive at the claimed subject matter.

The examiner admits that Young does not teach producing single phase AC from a DC source with PWM and relies on Yamanaka to teach this. If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123 USPO 349 (CCPA 1959). Young teaches how to run a three-phase motor from a single phase power line. To modify Young (the base reference that is directed to commercial power line technology) with Yamanaka (the modifying reference that is directed to power conversion for a vehicle battery pack) as argued by the examiner, would significantly change the principle of operation of Young. Thus, the rejection under 35 U.S.C. 103(a) is improper and Applicant requests that it be withdrawn.

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Further, the references taken together, do not disclose, suggest, or teach all of the claimed features. For example, claim 10 includes the features of a direct current source; a single pulse width modulation generator for converting direct current to alternating current to provide one power supply path of alternating current having a first phase; a splitter for splitting said one power supply path of alternating current into a plurality of power supply paths including at least a first power supply path, a second power supply path, and a third power supply path; at least one lead/lag circuit for shifting the alternating current of said second path to a second phase different than said first phase of said first power supply path; at least one lead/lag circuit for shifting the alternating current of said third path to a third phase different than said first phase or said second phase; and a plurality of induction motors for operating multiple vehicle systems via a three-phase alternating current power comprised of said first, second, and third paths.

The examiner provides no explanation of how the references meet claim 10. As shown above, claim 10 requires many features. The examiner provides absolutely no indication or description of how the several claimed features are met. The examiner's explanation is insufficient to support the examiner's argument that Young and Yamanaka render claim 10 obvious. Applicant respectfully requests a more detailed explanation of the examiner's rejection. Further, Applicant requests a more detailed explanation of examiner's arguments for all of the claims rejected under this combination of references.

The examiner apparently has also rejected claims 7, 9, 11, 14-15, 17-18 and 20 under 35 U.S.C. 103(a) based on the combination of Young and Yamanaka. The examiner admits that neither reference discloses the claimed features set forth in claims 7, 9, 11, 14-15, 17-18 and 20 but argues that it would have been "an obvious matter of design choice to utilize vehicle battery

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or thirty volt power or powering vehicle devices, since such a modification would have involved a mere change in the size of a component or utilize different suitable component is generally recognized as being within the level of ordinary skill in the art," citing In re Rose, 105 USPO 237 (CCPA 1955). The reasoning set forth in Rose is not applicable to the instant application. Rose, refers solely to dimensional characteristics of a component, e.g. making a package wider, longer, etc. The features set forth in claims 7, 9, 11, 14-15, 17-18 and 20 are not merely "dimensional" changes and instead involve unique operational characteristics and features that simply are not taught by either Young or Yamanaka.

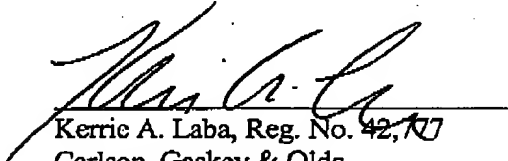
The examiner further argues that "where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art," citing In re Aller, 105 USPO 233. First, Applicant disagrees with examiner's characterization that the general conditions of all of the claims are disclosed in the prior art. The examiner has not indicated where any of the features of claims 1-20 are taught in the prior art. This is especially true in light of claims 2-20, which the examiner has completely ignored. Second, the reasoning set forth in Aller, as well as the examiner's argument, have nothing to do with Applicant's claims. Applicant requests further explanation as to the relevance of "workable ranges" to the subject claims.

Applicant asserts that all claims are allowable over the cited prior art and requests an indication of such. Applicant believes that no additional claim fees are due, however, if

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additional fees are required the Commissioner is authorized to charge Deposit Account No. 50-1482 in the name of Carlson, Gaskcy & Olds.

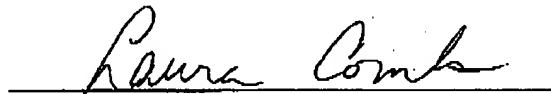
Respectfully submitted,

  
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Dated: May 7, 2003

CERTIFICATE OF TRANSMISSION UNDER 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted to the United States patent and Trademark Office, fax number (703) 872-9318 on May 7, 2003.

  
Laura Combs

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